

UNITED STATES PATENT OFFICE

2,549,632

READER FOR THE BLIND

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Application October 31, 1947, Serial No. 783,337

3 Claims. (Cl. 35—35)

1

This invention pertains to a reader for the blind, of the general type shown, described and claimed in patent application Serial Number 743,695, filed April 24, 1947, in the name of Gustave Theophile Louis Staar, for a Reader for the Blind, and to whom the present application is assigned.

Briefly, the reader device set forth in the above-mentioned Staar application comprises a long narrow tape-like record member of paper or film on which are recorded a series of marks representative of a succession of letters and/or numerals, and a pickup device including six blunt-pointed pins arranged in a position similar to the positions of the six dots which form the basis of the Braille system. The pickup device includes six pickup elements, preferably of the optical type, one for each of the six dots utilized in the Braille system, and each pickup element controls the raising and lowering of one of the six pins above a planar surface on which the blind person's finger rests. As the record member is driven through the pickup drive, a succession of indicia representative of letters move past the optical pickup device and the six pins are raised against the reader's finger in combinations representative of the letters on the record member, thus presenting to the reader a succession of Braille letters.

The present invention pertains to means whereby the reader can utilize two or more fingers for the Braille letters. Through one finger the reader gets a "presense" of the letter which is to come. This permits the experienced Braille reader to read at an extremely high rate of speed.

An object of the invention is to provide a system of reading for the blind, preferably based on the Braille system, wherein a very rapid rate of reading may be achieved.

Another object of the invention is to provide a reading system for a blind person wherein the person may utilize several fingers simultaneously for sensing the letters.

Other objects and a fuller understanding of the invention may be had by referring to the following description and claims read in conjunction with the drawings, wherein:

Figure 1 is an isometric view of a reader device for the blind embodying the invention;

Figure 2 is an isometric view of the device shown in Figure 1 with the magazine portion thereof removed;

Figure 3 is an isometric, partially broken away, view of the magazine for the blind reader device;

2

Figure 4 is a diagrammatic circuit of the device; and

Figure 5 is a detailed circuit diagram of the device.

The device comprises a long narrow record member carrying indicia representative of a succession of letters in combination with a device for reading the indicia comprising pickup means for sensing the indicia and means for driving the record member past the pickup means. An electric circuit is controlled by the pickup means in accordance with the indicia sensed by the pickup means, and there is a first and a second bank of plungers each comprised of a plurality of movable plungers. The plungers are actuated in accordance with electric current in said controlled electric circuit for indicating to the reader by the sense of feeling the succession of letters which pass the pickup means, and time delay means are provided for delaying the actuation of the second bank of plungers with respect to the actuation of the first bank of plungers.

With reference to Figure 1 of the drawings the device is shown as comprising a reproducer identified by reference character 15 and a readily replaceable magazine 16 mounted on the reproducer ready for operation. The magazine has fastened to its top surface by rivets 18 an open-faced holder 17 into which a label 19 may be slipped. The label is embossed in regular Braille with the title of the literary work which is within the magazine so that the blind person may readily select the work that he desires from a large number of such magazines. A large library can be purchased and maintained by the average blind person because the cost of the reproducer is not high and any number of inexpensive magazines can be used with it, similar to the purchase of a phonograph and a large number of phonograph records.

Within the magazine 16 (shown in Figure 3) there is a long length of record material 20, such as paper, film, or the like, coiled in a first spiral 10 about a hollow spool 21, and adapted to be unwound from the first spiral into a second spiral about the spool 22. One end of the record material is preferably permanently connected to the spool 21 and the other end is permanently connected to the hollow spool 22. Thus the blind operator is spared the task of connecting the end of the record material to a spool upon each operation of the device. Connected to the case of the magazine are two guiding rollers 23 and an arcuate guide 24 which is spaced a slight distance away from an opening 25 in one edge 26 of the